Family Rachycentridae

Body elongate, fusiform, very slender, compressed. Caudal peduncle moderate, compressed. Head rather wide, low, pike like, bones above appearing through thin skin. Snout broad, depressed. Eye small, little advanced, without adipose lids. Mouth rather wide, nearly horizontal, lower jaw protruded. Maxillary about reaches eye. Jaws, palate and tongue with short teeth. Premaxillaries not protractile. Nostrils together. Interorbital broad, depressed. Gill rakers lanceolate. Branchiostegals 7. No air bladder. Pyloric appendages branched.

+trial; 67 or 68 apical denticles, with 4 or 5 series of basal segments; circuli fine.

D. VIII — I, 8, I, second spine 1 1/8 to 1 1/3 in head, first ray 1 3/4 to 2 1/8; A. I, 6, I, spine 2 7/8 to 3, first ray 1 3/4 to 2; caudal 1, well forked; least depth of caudal peduncle 2 1/2 to 2 3/5; pectoral 1 1/8 to 1 1/3; ventral 1 1/3 to 1 2/3.

Dull brown above, whitish below. Iris whitish, pale slate in formaline specimens. +Spinous dorsal whitish, broadly tipped black, with 1 or 2 median gray to black horizontal bands. +Soft dorsal light brown, tip of front lobe dusky to black and with 2 dusky longitudinal bands, upper midway across fin anteriorly and lower from near middle of base of fin out over ends of last rays.

Vertebrae 25, of which 13 or 14 caudal. Body scaly. Lateral line complete. First dorsal of few, free, short spines, without connecting membrane. Caudal forked or lunate. Pectoral low, moderate. Ventral thoracic.

Large slender fishes of wide distribution. Owing to their superficial resemblance some writers placed them with the Echeneidae, though their affinities are now known to be with the carangids.

Genus Rachycentron Kaup

Rachycentron Kaup, Isis, vol. 19, p. 89, 1826. (Type Rachycentron typus Kaup, monotypic.)

Elacate Cuvier, Hist. Nat. Poiss., vol. 8, p. 241, 1831. (Type Elacate malabarica Cuvier, designated by Jordan and Gilbert, Bull. U. S. Nat. Mus., No. 16, p. 418, 1882.)

Xiphias (not Cuvier 1817) (Cantor) Valenciennes, Hist. Nat. Poiss., vol. 8, p. 333, 1831. (Type Xiphias edax (Cantor) Valenciennes = Gasterosteus canadus Linnaeus, monotypic.)

66069 U.S.N.M. Suva, Fiji.
Albatross Collection. Length 112 mm.

71354 U.S.N.M. Kagoshima.
Albatross Collection. Length 133 to 155 mm.
2 examples.

72694 U.S.N.M. Java. Bryant and Palmer. Length 105 mm. As Lyncus sundaicus.

72696. U.S.N.M. Java. Bryant and Palmer. Length 68 to 121 mm. 5 examples.

72697 U.S.N.M. Java. Bryant and Palmer. Length 167 mm.

84268 U.S.N.M. Gamboanga. Dr. Fred Baker. Length 108 mm.

47512 A.N.S.P. Philippine Islands. Commercial Museum of Philadelphia. Length 120 mm. Type of Lyncoides bilineatus.

47513, to 47517 A.N.S.P. Philippine Islands. Commercial Museum of Philadelphia. Length 69 to 140 mm. Paratypes of

2081

Meladerma Swainson, Nat. Hist. Animals, vol. 2, p. 243, 1839. (Type Meladerma nigerrima Swainson = Elaeate pondiceriana Cuvier, monotypic.)

19730. Jaslobaw market, July 25, 1909.
Length 105 mm.

4 examples. Tilig, Lubang Island.
July 14, 1908. Length 100 to 103 mm.

21264. Tifu Island, Boero, Dutch
East Indies. December 10, 1909. Length 114 mm.

3 examples. Kema, Celebes. November
13, 1909. Length 61 or 62 mm.

32746 U.S.N.M. Indian Archipelago.
Royal Museum Leiden. Length 124 mm.

3 examples (with 12614 U.S.N.M.).
Zangibar. British Museum. Length
51 to 98 mm.

2 examples (with 51982 U.S.N.M.).
Negros, Philippines. Dr. Bashford Dean.
Length 54 to 82 mm.

56312 U.S.N.M. Cavite. G.A. Long.
Length 68 to 150 mm. 7 examples.

1 example (with 58046 U.S.N.M.). Zamboanga.
Dr. E.A. Mearns. Length 145 mm.

Body partly cylindrical. Head pointed, moderate, depressed, wider than deep, larger in young. Snout long as wide. Eye large in young, small with age. Mouth moderately large. Maxillary small, not reaching eye in adult, longer in young. Bands of sharp, conic teeth in each jaw and on vomer, palatines and tongue. Preopercle unarmed. Lower gill rakers 12 to 14. Scales small, adherent. Lateral line irregularly waved. First dorsal of 7 or 8 low, stout, equal spines, each depressible in groove. Soft dorsal long, rather low, somewhat falcate, like nearly opposite anal. Anal with 2 weak spines. Caudal strong. Pectoral broadly

falcate. Ventral with spine and 5 rays, inserted close behind pectoral origin, longer in young.

One species, a large, strong, voracious shore fish, widely distributed.

2084

Rachycentron canadum (Linnaeus)

Gasterosteus canadus Linnaeus, Syst. Nat., ed. 10, vol. 1, p. 491, 1766 (type locality, Carolina). — Forster, Cat. Animals North America, p. 22, 1771 (name only). — Bonnaterre, Tabl. Ichth., p. 137, 1788 (Carolina). — Gmelin, Syst. Nat. Linnaeus, pt. 1, p. 1326, 1789 (copied). — Walbaum, Artedi Pisc., vol. 3, p. 449, 1792 (copied).

22335. Mantaquin Bay, Palawan. April 2, 1908. Length 72 mm.

9 examples. Hasuglaw, Luzon. January 16, 1908. Length 61 to 68 mm.

20802. Iloilo River tide water, Luzon. June 18, 1909. Length 78 to 94 mm.

1 example. Nogar Point, Panay. February 4, 1908. Length 65 mm.

13955, 17577. Poluan Bay, Mindoro. December 11, 1908. Length 80 to 155 mm. 5 examples.

19933 to 19935. Parang, Mindanao. May 23, 1908. Length 142 to 163 mm. 20 examples.

1 example. Philippines. Length 105 mm.

22060. Port Jamelo, Luzon. July 13, 1908. Length 72 mm.

18847 [1277], 22373. River at Pasacao, Luzon. March 9, 1909. Length 108 to 145 mm. 15 examples. [1277.] Olivaceous above, lateral line showing darker; below

2085

Thynnus canadensis Gray, Cat. Fish Gronow, p. 122, 1854 ("Mari Carolinam meridionalem").

Elacate canada Holbrook, Ichth. South Carolina, ed. 2, p. 95, pl. 14, fig. 1, 1860. — Steindachner, Denn. Naturh. Hofmus. Wien, vol. 11, p. 225, 1896 (Bangkok).

5 examples.

1 Hinunangan Beach, Leyte. July 30, 1909. Length 68 to 91 mm.

19386 to 19388. Iloilo market, Panay. March 28, 1908. Length 80 to 99 mm.

20016. Langley Point, Cavite, Luzon. March 23, 1908. Length 63 to 98 mm.

35 examples.

8 examples. Lingayen Gulf, Luzon. May 11, 1909. Length 97 to 106 mm.

1 example. Manila Bay. December 9, 1907. Length 78 mm.

2 examples. Manila Bay. December 12, 1907. Length 106 to 111 mm.

19606. Manila Harbor. January 13, 1908. Length 63 mm.

4 examples. Manila Harbor. March 16, 1908. Length 63 to 74 mm.

22561. Manila market. January 13, 1908. Length 167 mm.

Rachycentron canadus Jordan and Evermann, Bull. U. S. Nat. Mus., No. 47, pt. 1, p. 948, 1896; vol. 4, pl. 148, fig. 401, 1900. — Evermann and Veale, Bull. Bur. Fisher., vol. 26, p. 61, 1906 (1907) (Bulan). — Fowler, Proc. Acad. Nat. Sci. Philadelphia, vol. 86, 1934, p. 453 (Natal).

— Weber and Beaufort, Fish. Indo Austral. Archip., vol. 6, p. 302, fig. 63, 1931 (compiled).

~~1907~~

22094. Abuyog, Leyte. July 26, 1909.
Length 71 to 81 mm. 7 examples.

17 examples. Atulayan Bay, Luzon.
June 17, 1909. Length 69 to 93 mm.

20143. Bacoor, Luzon. June 15, 1908.
Length 61 mm.

5964, 5967 [753], 5984, Cavite market.
December 1, 1908. Length 58 to 111 mm.

2641, 4194. D. 5361. Corregidor Light,
N. 89° W., 7.2 miles (14°24'15" N., 120°41'30"
E.), Manila Bay. February 9, 1909. Length
157 to 170 mm.

7558 to 7560, 7569, 11728, 20410. Cotabato,
Mindanao. May 20, 1908. Length 77 to 140 mm.
Largest, or 7569, with upper caudal lobe
gone and healed leaving only lower lobe
intact.

20 examples. Davao, Mindanao. May 16,
1908. Length 69 to to 129 mm.

Rachycentron canadum Jordan and Richardson, Bull. Bur. Fisher., vol. 27, p. 251, 1907 (1908) (Manila); — Fowler, Journ. Bombay Nat. Hist. Soc., vol. 33, no. 1, p. 111, September 30, 1928 (Bombay); Mem. Bishop Mus., vol. 11, no. 5, p. 327, 1931 (reference); vol. 11, no. 6, p. 406, 1934 (reference); Proc. Acad. Nat. Sci. Philadelphia, vol. 87, p. 140, 1935 (Bangkok).

Mem. Carnegie Inst., vol. 4, no. 5, p. 180, Aug. 28, 1909 (Takao).

— Jordan and Hubbs, Mem. Carnegie Inst., vol. 10, no. 2, p. 225, June 27, 1925 (Osaka).

— Iguka and Matsumura, Cat. Zool. Spec. Tokyo Imp., Vert., p. 167, 1920 (Ribuzen).

body length; A. 7. Rose red lateral band anterior or for greater extent below lateral line, but crossing lateral line posteriorly. Second similar reddish band along profile of back. Dorsal and caudal with alternate milk white narrow and blackish or greenish brown bands. Tip of first dorsal deep black. Anal base sulphur yellow. Length not given.

2088

Rachycentrum canadus Barnard, Ann. South African Mus., vol. 21, pt. 2, p. 511, pl. 27, fig. 4, Oct. 1927 (compiled).

Apogonichthys carinatus (Cuvier).

Apogon carinatus Cuvier, Hist. Nat. Poiss., vol. 2, 1828, p. 157. Japan. — Schlegel, Fauna Japon., Poiss., pt. 1, 1842, p. 3 (Nagasaki). — Richardson, Ichth. China Japan, 1846, p. 221 (copied). — Nyström, Svenska. Vet. Akad. Handl., 1887, p. 8 (Nagasaki).

Apogonichthys carinatus Bleeker, Verh. Batav. Genootsch., No. 4, vol. 26, 1857, p. 56, pl. 1, fig. 3 (Nagasaki). — Günther, Cat. Fishes Brit. Mus., vol. 1, 1870, p. 247 (copied). — Elera, Cat. Fauna Filipinas, 1895, p. 471 (Luzon). — Jordan and Snyder, Proc. U. S. Nat. Mus., vol. 23, 1901, p. 892, fig. 1 (Misaki, Wakanoura, Nagasaki). — Snyder, Proc. U. S. Nat. Mus., vol. 42, 1912, p. 412 (Shimizu). — Jordan and Hubbs, Mem. Carnegie Mus., vol. 10, no. 2, 1925, p. 230 (Wakanoura, Toba, Kochi, Misaki).

Scomber niger Bloch, Naturg. Ausl. Fische, vol. ~~10~~ 7, p. 57, pl. 337, 1793 (type locality, Southern seas between Africa and America; Brazil; Cape Corse).

Elacate nigra Günther, Cat. Fish. Brit. Mus., vol. 2, p. 375, 1860 (New Orleans; Jamaica; Malay Peninsula; Japan; Penang).
— Day, Fishes of Malabar, p. 73, 1865.
— Bleeker, Verslag. Kon. Akad. Wet. Amsterdam, ser. 2, vol. 2, p. 291, 1868 (Rio, Bintang).
— Playfair, Fishes of Zanzibar, p. 67, 1866 (Zanzibar; Aden).

and median longitudinal dark band, or sometimes basal and lower band slightly oblique across fin. Upper caudal lobe with 4 oblique dark bands about wide as interspaces and lower lobe with 3 oblique bands.

Red Sea, India, Pinang, East Indies, Philippines, China, Japan, Melanesia, Polynesia. Mullloides pinnivittatus Steindachner, overlooked by most writers on Japanese fishes seems to be the present species:

Depth 5 in total; head 5. Snout 3 in head; eye 4 1/3, little less than nearly level interorbital; teeth fine, numerous, form small band; barbels reach little beyond preopercle. Scales 35 or 36 in lateral line. D. VII – I, 8, first dorsal nearly equals body depth or 6 in total

— Klunzinger, Verh. zool. bot. Gesell. Wien, vol. 21, p. 445, 1871 (Red Sea).
— Bleeker, Rech. Faune Madagascar, Pollen et van Dam, pt. 4, p. 98, 1874 (reference).

— Day, Fishes of India, pt. 2, p. 256, pl. 55, fig. 2, 1876 (Madras). — Castelnau, Proc. Linn. Soc. New South Wales, vol. 3, p. 381, 1879.
— Klunzinger, Fische Roth. Meer, vol. 1, p. 114, 1884.
— Meyer, Anal. Soc. Espan. Hist. Nat. Madrid, vol. 14, p. 27, 1885 (Macassar).
— Macleay, Proc. Linn. Soc. New South Wales, vol. 5, pt. 4, p. 560, 1881 (Port Jackson).
— Day, Fauna British India, Fishes, vol. 2, p. 213, fig. 75, 1889.
— Steindachner and Döderlein, Denks. Akad. Wiss. Wien, vol. 49, pt. 1, p. 181, 1885 (Tokio).

— Sauvage, Hist. Nat. Madagascar, Poiss., p. 518, 1891 (reference).

2 scales above, 6 below, 5 predorsal, apparently a single row of scales on cheeks. Fins apparently scaleless, except caudal base. Lateral line complete, tubes large, well exposed. Scales with 7 or 8 basal radiating striae, 18 short apical denticles in alternated series; circuli moderate.

D. VI – I, 9, second dorsal spine 2 1/8 in total head length, spine of second dorsal 2 1/8; A. II, 8, spine 2 1/5; caudal (damaged, "doubtless, rounded in life"); least depth of caudal peduncle 2 2/3; pectoral 1 1/2; ventral 1 3/5.

Largely dark or dusky. Obscure dark spots, ill defined, on muzzle and opercle. Spinous dorsal dusky terminally. Soft dorsal and

Centronotus gardenii Lacépède, Hist. Nat. Poiss., vol. 3, p. 310, 318, 1802 (type locality, Carolina).

Centronotus spinosus Mitchill, Trans. Lit. Philos. Soc. New York, vol. 1, p. 490, pl. 3, fig. 9, 1815 (type locality, New York market).

Elacate pondiceriana Cuvier, Hist. Nat. Poiss., vol. 8, p. 329, 1831 (type locality, Pondicherry). — Rüppell, Neue Wirbelth. Fische, p. 43, pl. 12, fig. 3, 1835 (Massaua, Red Sea).

Rachycentron pondicerrianum Jordan and Snyder, Annot. Zool. Japon., vol. 3, p. 68, 1901 (reference). — Jordan and Seale, Bull. Bur. Fisher., vol. 26, p. 14, 1906 (1907) (Iloilo; Manila). — Jordan and

to caudal base and 2 to 5 more on latter; 3 above, 7 below, 14 to 17 predorsal, 2 or 3 rows on cheek to preopercle ridge. Scales with 5 or 6 basal radiating striae; 60 to 119 apical denticles, with 9 to 15 transverse series of basal elements; circuli very fine.

D. VIII — I, 8, I, second spine 1 1/4 to 1 3/5 in head, first branched ray 1 7/8 to 2 1/8; A. I, 6, I, or 7, I, spine 2 3/5, first ray 1 4/5 to 2 1/5; caudal 1 to 1 1/5, well forked, least depth of caudal peduncle 2 1/2 to 3; pectoral 1 1/5 to 1 1/4; ventral 1 1/2 to 1 4/5.

Pale brown, little lighter below. Iris gray brown. Fins pale. Spinous dorsal with black apex and 1 or 2 horizontal dusky or blackish bands. Soft dorsal with dusky upper edge

2092

Quety, Chem. Carnegie Inst., vol. 6, No. 1, p. 30, June 1913 (Fusan, Korea).

f.[2] No silvery lateral gland below.
Amioidea

a.[2] Acropominae. Ent advanced, nearer ventral bases than anal origin; jaws with small canines; preopercle entire; anal with 3 spines and 7 rays. Acropoma

Rachycentron pondicerianum McCulloch, Proc. Linn. Soc. New South Wales, vol. 40, pt. 2, p. 263, Sept. 15, 1915 (Madras; New South Wales; Moreton Bay); Rec. Austral. Mus., vol. 15, No. 1, p. 30, April 15, 1926 (above materials; Fremantle; Great Barrier Reef). — Whitley, Journ. Pan Pac. Res. Inst., vol. 3, No. 1, p. 12, January - March 1928 (Santa Cruz Islands). — McCulloch, Austral. Mus. Mem., No. 5, pt. 2, p. 180, Sep. 10, 1929 (reference).

1 example. Alimango Bay, Burias Island. March 5, 1909. Length 37 mm.

1 example. Cataingan Bay, Masbate Island. April 18, 1908. Length 35 mm.

2 examples. Canmahala Bay, Luzon. March 11, 1909. Length 24 to 30 mm. [1326.]

Olivaceous with mottling of paler on sides. Head rather brownish above. Bright dusky stripe behind eye to pectoral, not quite reaching opercular edge. First dorsal brownish, edge paler. Other vertical fins pale, speckled with reddish. Pectorals pale pink. Ventrals darker on terminal portions.

22400. Canmahala Bay. March 11, 1909. Length 37 mm.

2094

Rachycentron pondicerianus Fowler,
Journ. Acad. Nat. Sci. Philadelphia,
ser. 2, vol. 12, p. 513; June 10, 1904
(Padang, Sumatra).

Depth 2 3/5 to 2 4/5, head 2 1/3 to 2 2/3, width 2 1/4 to 2 1/3. Snout 4 1/2 to 5 in head from snout tip; eye 3 1/3 to 3 2/3, greater than snout or interorbital; maxillary 1 7/8 to 2 in head, reaches 2/3 to 3/4 in eye, expansion 1 2/3 to 1 7/8; teeth villiform, in bands in jaws, on vomer and palatines; interorbital 4 3/4 to 5, in head, slightly convex; preopercle ridge and edge entire. Gill rakers 3+10, lanceolate, greatly longer than gill filaments or 1 4/5 in eye.

Scales 23 in lateral line to caudal base and 2 or 3 more on latter, 2 above, 7 below, 5 predorsal 2 rows on cheek; head naked, except cheeks and opercles. Tubes in lateral line all simple, large,

2095

Elacate motta Cuvier, Hist. Nat. Poiss., vol. 8, p. 332, 1831 (on Pedda-mottah, Russell, Fishes of Coromandel, vol. 2, p. 39, ~~locality~~, pl. 153, 1803, type locality, Vizagapatam).

— Bleeker, Verh. Batavia. Genoot. (Makreel.), vol. 24, p. 42, 1852 (Batavia; Samarang). — Sauvage, Hist. Nat. Madagascar, Poiss., p. 518, 1891 (reference).

Elacate mottah Bleeker, Nat. Tijds. Ned. Indie, vol. 3, p. 445, 1852 (Banka); vol. 5, p. 319, 1853 (Amboina); Verh. Batavia. Genoot. (Nat. Ich. Japan), vol. 25, p. 14, 1853 (reference); (Nat. Ichth. Bengal), vol. 25, p. 42, 1853 (reference); Nat. Tijds. Ned. Indie, vol. 7, p. 361, 1854 (Batjan); vol. 9,

~~1947~~

Zamboanga). — Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1927, p. 285 (Santa Maria, Arani, Orion, Philippines; types).

Depth 3 to 3 4/5; head 3 to 3 3/5, width 1 7/8 to 2. Snout 2 1/5 to 3 in head; eye 3 1/2 to 4 1/4, 1 3/4 to 2 in snout, 1 1/8 in interorbital; maxillary reaches opposite eye or 1/2 in eye, expansion 1 1/2 to 2 1/6 in eye, length 2 1/4 to 2 2/5 in head; teeth small, granular, short, in narrow bands in jaws of 3 or 4 irregular series; patch of granular teeth on vomer and each palatine, none on tongue; barbels short, reach hind preopercle edge; interorbital 3 1/4 to 3 4/5, scarcely elevated, depressed medially. Gill rakers 8 to 10 + 19 to 22, lanceolate, 1 1/5 to 1 1/2 in gill filaments, which 1 1/8 to 1 1/3 in eye.

Scales 32 to 35 in lateral line

f. 394, 1855 (North Pasuruan); vol. 10, f. 347, 1856 (Rio, Bintang); vol. 14, f. 245, 1857 (Prigi, Java); Act. Soc. Sci. Ind. Neerl., vol. 3, no. 3, f. 3, 1857-58 (Kioesio), f. 5 (Japan); Nat. Tijds. Ned. Indie, vol. 16, f. 317, 1858 (Tanara); ~~Nat~~ Act. Soc. Sci. Ind. Neerl., vol. 5, no. 7, f. 2, 1858-59 (Sinkawang, Borneo); vol. 8 (Sumatra), f. 12, 1859 (Benculen).

Elacate malabarica Cuvier, Hist. Nat. Poiss., vol. 8, f. 332, 1831 (type locality, Malabar); Règne Animal, Cuvier, ed. ill., Poiss., pl. 54, fig. 2, 1839. — Guichenot, Mém. Soc. Sci. Nat. Cherbourg, vol. 12, f. 146, 1866.

Elacate atlantica ~~Valenciennes~~ Cuvier, Hist. Nat. Poiss., vol. 8, f. 334, pl. 233, 1831 (type locality, Brazil). — Swainson, Nat. Hist. Animals, vol. 2, f. 243, 1839 (reference).

Upeneus bivittatus Valenciennes, Hist. Nat. Poiss., vol. 7, 1831, p. 520, Coromandel.

Upeneoides bivittatus (Bleeker, Verhandel. Batavia. Genootsch. (Percoid.), vol. 22, 1849, p. 64 (~~Java~~ part). 1/21 Day, Proc. Zool. Soc. London, 1867, p. 702.

Hyperaus vittatus (not Forskål) Cantor, Journ. Asiatic Soc. Bengal, vol. 18, pt. 2, 1849, p. 1017 (Sea of Tinang).

Mulloides pinnivittatus Steindachner, Sitz. Ber. Akad. Wiss. Wien, Math.-naturwiss. Klasse, vol. 61, pt. 1, 1870, p. 624. Nagasaki.

Mullus erythrinus (Van Hasselt) Bleeker, Verhandel. Akad. Wetensch. Amsterdam, vol. 15, No. 3, 1875, p. 5 (name in synonymy).

Upeneoides belaqua Fowler, Proc. Acad. Nat. Sci. Philadelphia, 1918, p. 40, fig. 16. Philippines. 1/21 Fowler and Bean, Proc. U. S. Nat. Mus., vol. 62, 1922, p. 42 (types;

Elacate bivittata Cuvier, Hist. Nat. Poiss., vol. 8, p. 338, 1831 (type locality, Moluccas). — Schlegel, Fauna Japonica, pts. 5–6, pl. 56, 1844. — Cantor, Journ. Asiatic Soc. Bengal, vol. 18, pt. 2, p. 1098, 1849 (1850) (Pinang Sea; Singapore).

Elacate bivittata Schlegel, Fauna Japonica, Poiss., pts. 5–6, p. 104, 1844 (Natsushima; Nagasaki).

Elacate bivittata Richardson, Ichth. China and Japan, p. 269, 1846 (China; Japan).

Meladerma nigerrima Swainson, Nat. Hist. Animals, vol. 2, p. 243, 1839 (on Pedda mottah Russell).

Elacate hexacantha Bleeker, Nat. Geneesk. Arch. Ned. Indie, vol. 2, p. 516, 1845 (type locality, Batavia, Java).

2098

Elaeate falcipinnis Gosse, Nat. Sojourn. Jamaica, p. 208, 1851 (type locality, Jamaica).

~~175~~

84231 and 84232 U.S.N.M. Zamboanga. Dr. F. Baker. Length 163 to 170 mm. 2 examples.

28076 A.N.S.P. Honolulu. Bureau of Fisheries (03834). Length 300 mm.

28242 A.N.S.P. Honolulu. Stanford University. Length 257 mm.

Depth 6 1/5 to 8; head 3 3/4 to 4, width 1 3/5 to 1 2/3. Snout 2 1/2 to 3 in head from snout tip; eye 4 1/2 to 8, 2 to 3 1/2 in snout, 2 to 3 1/2 in interorbital; maxillary reaches 1/4 to 2/5 in eye, expansion 1 1/2 to 1 4/5 in eye, length 2 2/5 to 2 2/3 in head from snout tip; interorbital 2, low, broadly convex. Gill rakers 3 or 4 + 9 or 10, lanceolate, 1/4 in gill filaments or subequal with age.

Scales very small, 3/2 along lateral line to caudal base; 25 above to soft dorsal origin, 35 below, 22 predorsal to occiput. Top of head with fine, short, broken, parallel striae.

D. VIII or IX — III or IV, 28 to 33, first branched ray 1 3/5 to 2 in

total head length; D. II or III, 25 to 29, first branched ray 2 to 2 3/5; caudal 1 1/8 to 1 1/4, lunate, upper lobe longer; least depth of caudal peduncle 4 3/4 to 5 1/2; pectoral 1 1/4 to 1 2/5, rays II, 19 or 20; ventral rays I, 5, fin 2 1/4 to 2 1/2 in total head length.

Brown, with silvery lateral band limiting pale or light brownish color of abdomen. In young broad blackish lateral band. Fins brownish. Young with outer caudal edges brownish.

Red Sea, Arabia, Zanzibar, Natal, Madagascar, India, Malaya, East Indies, Siam, Philippines, Formosa, China, Japan, New South Wales, Queensland, Micronesia. Also in the tropical

or subtropical Atlantic, but not in the eastern Pacific. Reaches 1470 mm (4 feet 10 inches) according to Day.

U. S. N. M., No. 47813. Port Jackson, Australian Museum. Length 445 mm.

U. S. N. M., No. 56094. Bureau of Fisheries (4151). Length 630 mm.

U. S. N. M., No. 56313. Iloilo. Dr. G. A. Lung. Length 80 to 170 mm. Two examples. As Rachycentron fondicerriana.

U. S. N. M., No. 72583. Batavia, Java. April 2, 1909. O. Bryant and W. Palmer. Length 164 mm.

U. S. N. M., No. 75915. Japan? P. L. Jouy. Length 268 mm.

U. S. N. M., No. 87018. Foochow, China. A. Sowerby. Length 303 mm.

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C. h. S. P., one example. Bombay;
1925. Prof. F. Hallberg. Purchased.
Length 5 7/5 mm.